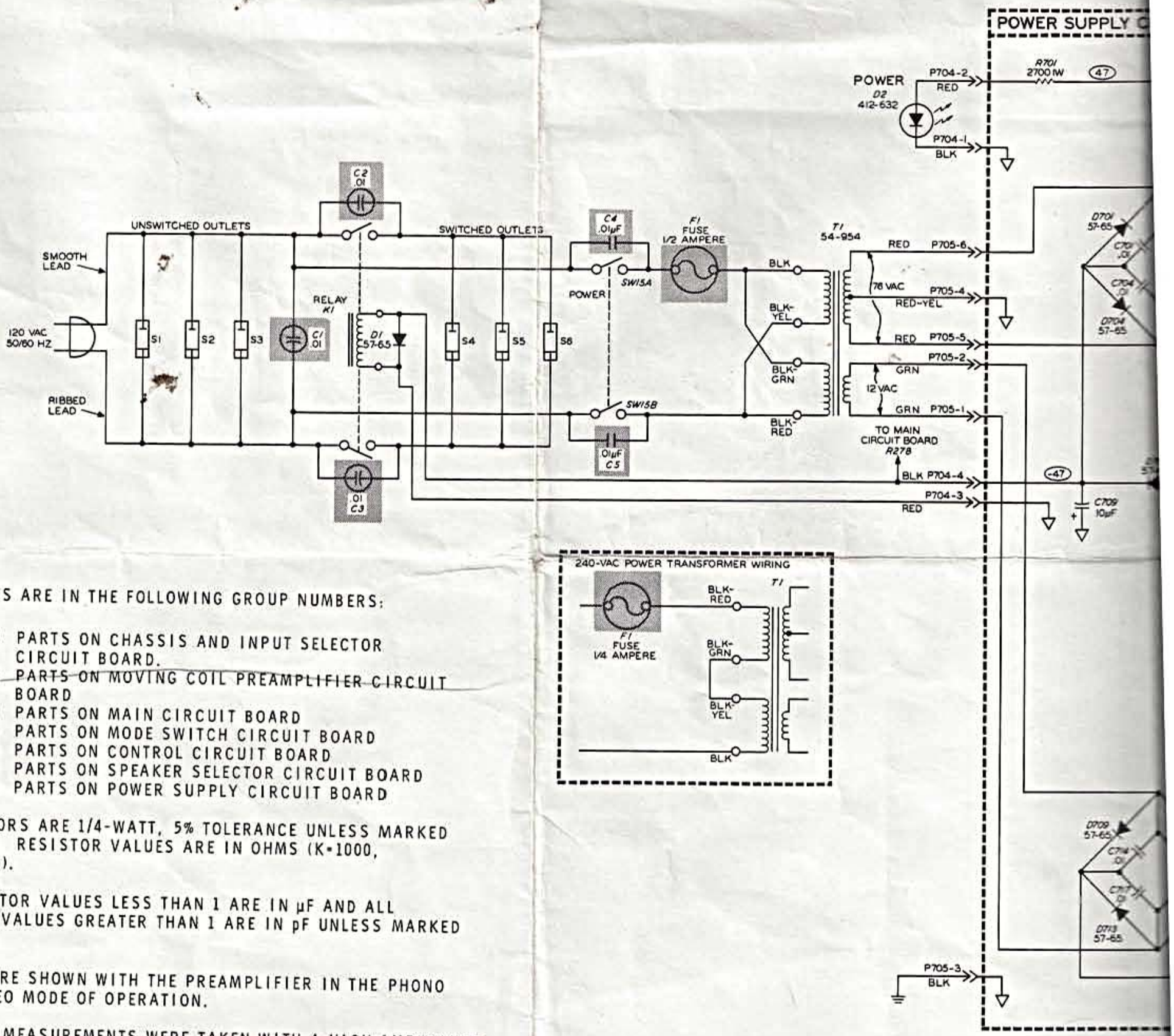


NOTES:

1. COMPONENTS ARE IN THE FOLLOWING GROUP NUMBERS:

1-99	PARTS ON CHASSIS AND INPUT SELECTOR CIRCUIT BOARD.
101-200	PARTS ON MOVING COIL PREAMPLIFIER CIRCUIT BOARD
201-400	PARTS ON MAIN CIRCUIT BOARD
401-500	PARTS ON MODE SWITCH CIRCUIT BOARD
501-600	PARTS ON CONTROL CIRCUIT BOARD
601-700	PARTS ON SPEAKER SELECTOR CIRCUIT BOARD
701-800	PARTS ON POWER SUPPLY CIRCUIT BOARD

2. ALL RESISTORS ARE 1/4-WATT, 5% TOLERANCE UNLESS MARKED OTHERWISE. RESISTOR VALUES ARE IN OHMS (K=1000, M=1,000,000).

3. ALL CAPACITOR VALUES LESS THAN 1 ARE IN µF AND ALL CAPACITOR VALUES GREATER THAN 1 ARE IN pF UNLESS MARKED OTHERWISE.

4. SWITCHES ARE SHOWN WITH THE PREAMPLIFIER IN THE PHONO M.C., STEREO MODE OF OPERATION.

5. DC VOLTAGE MEASUREMENTS WERE TAKEN WITH A HIGH IMPEDANCE INPUT VOLTMETER FROM THE POINT INDICATED TO CHASSIS GROUND. VOLTAGES MAY VARY ±20%. LINE VOLTAGE WAS 120 VAC, 60 Hz.

6. ALL VOLTAGE MEASUREMENTS WERE MADE UNDER NO SIGNAL CONDITIONS.

7. ⬭ THIS SYMBOL INDICATES A DC VOLTAGE.

8. ▽ THIS SYMBOL INDICATES A CIRCUIT BOARD GROUND.

9. ⏚ THIS SYMBOL INDICATES A CHASSIS GROUND.

10. ▽* THIS SYMBOL INDICATES A GROUND INDEPENDENT OF OTHER GROUNDS.

11. —≪ THIS SYMBOL WITH A NUMBER INDICATES A CONNECTOR PLUG AND PIN CONNECTION. FOR EXAMPLE: P504-6 INDICATES PLUG P504, PIN 6.

12. * BUILDERS SELECTED VALUES.

13. □ BALANCE CONTROL.WITH WIPER IN BOXED AREA THERE IS NO SIGNAL LOSS.

14. PARTS IN SHADED AREAS ARE CRITICAL FOR CONTINUED SAFETY. REPLACE THEM ONLY WITH PARTS OF THE SAME RATING OR WITH THE PROPER HEATH PARTS.

SCHEMATIC OF THE HEATHKIT® MODEL AP-1800 DELUXE PREAMPLIFIER

MOVING COIL PREAMPLIFIER CIRCUIT BOARD

PART OF INPUT SELECTOR CIRCUIT BOARD

LEFT PHONO M.C. J11 P103-4 RED P103-3 BLK

R101 100 C101 .02 C102 4.7μF

Q101 417-920 Q102 417-920 Q103 417-920 Q104 417-920 Q105 417-920

R102 10K R103 22 R104 22 R105 22 R106 22 R108 22 R111 27 R112 3.0

R107 680 R113 2700 R114 47 C104 .001 C103 15μF

Q106 417-620 Q107 417-920

C105 33μF R116 33 R115 3900 C106 .02

P102-4 P102-3

SW1A

LEFT J3 PHONO J1 PHONO

P2-2 BLK P2-1

WHT-ORG P101-1 TO POWER SUPPLY C7/8

C107 4.7μF R117 1200 D101 56-67 C108 100μF

Q108 417-874 Q109 417-801 Q111 417-225

R118 2700 R119 10K C109 200

D102 56-16 C110 100μF

Q112 417-874 Q113 417-801 Q114 417-801 Q115 417-225

R121 1200 R122 2700 R123 10K R124 2.7 C111 200 C112 .05

Q113 Bad. 417-801

BLK P101-2

SW1 SELECTOR PHONO1 TUNER PHONO2 AUX1 PHONO M.C. AUX2

RIGHT PHONO M.C. J12 P103-1 RED P103-2 BLK

R125 100 C113 .02 C119 470μF

Q116 417-920 Q117 417-920 Q118 417-920 Q119 417-920 Q121 417-920

R126 10K R127 22 R128 22 R129 22 R131 22 R133 22 R135 27 R136 3.0 C114 15μF

Q122 417-920 Q123 417-920

R132 680 R137 2700 R138 47 C115 .001

C117 33μF R141 33 R139 3900 C118 .02

P102-1 P102-2

SW1B

J4 PHONO J2 PHONO

P2-4 RED P2-3

PART OF MAIN CIRCUIT BOARD

PHONO PREAMPLIFIER CIRCUIT

PHONO FILTERS

PHONO OVERLOA

Q201 417-920
Q202 417-920
Q203 417-283
Q204 417-283
Q205 417-284
Q206 417-284
Q207 417-283
Q208 417-284
Q209 417-283
Q211 417-801
Q212 417-801
Q213 417-920
Q214 417-920
Q215 417-283
Q216 417-283
Q217 417-284
Q218 417-284
Q219 417-283
Q221 417-284
Q222 417-283
Q223 417-801
Q224 417-801
Q225 417-874
Q226 417-801

SW303A
SW303B
CARTRIDGE CAPACITANCE SW203
CARTRIDGE SENSITIVITY SW204
1MV 2MV 4MV
P207-2
P207-1
P206-2
P206-1
+35V
-35V

PART OF INPUT SELECTOR CIRCUIT BOARD

PART OF MODE SWITCH CIRCUIT BOARD

PART OF MAIN CIRCUIT B

P209-4 WHT P1-2 SW1C

J1 TUNER
J5 AUX 1 LEFT
J3 AUX 2

C6 .05

P1-6 GRY P402-2

SW402A SW403A SW403C

SW401A

R401 560

ADAPTER LEFT
J19 OUT
J17 IN

P403-2 ORG P206-2

SW202A

R291 4700

TAPE 2 IN J21
TAPE 2 OUT J25
TAPE 1 IN J23
TAPE 1 OUT J27

LEFT

R402 560
R403 560

C7 .05

SELECTOR SW1
PH1 TUNER
PH2 AUX 1
PHONO M.C. AUX 2

DETECTOR

C237 4.7μF +

R284 22K
R286 3300 1W BLK
R285 22K
D204 56-56
D205 LED 412-632
35V RED

Q227 417-801

D205 - MOUNTED ON FRONT PANEL

SW402 TAPE MONITOR SOURCE 1 2

SW401 ADAPTER OFF ON

SW403 RECORD MODE 2 SOURCE 1→2 OFF

SW202B

R288 5600

SW202C

R292 4700

J2 TUNER
J6 AUX 1 RIGHT
J4 AUX 2

P209-2 WHT-BRN P1-1 SW1D

P1-5 YEL P402-4

SW402B SW403B SW403D

R404 560

SW401B

ADAPTER RIGHT
J20 OUT
J18 IN

P403-4 BLU P206-1

TAPE 2 IN J22
TAPE 2 OUT J26

RIGHT

R405 560

OARD

CONTROL CIRCUIT BOARD

HIGH LEVEL AMPLIFIER AND LOUDNESS CIRCUIT

FILTER CIRCUIT

P202-3 BLU

P504-6

P504-5

P504-4

P504-2

P504-1 ORG

P504-3 BLK

SW202 STEREO L+R L-R REV

VOLUME

LOUDNESS OFF

SW503 LOW FILTER 20HZ FLAT 50HZ

SW504 HIGH FILTER 6000HZ FLAT 12K HZ

-35V

+35V RED

+35

-35

C500 .05

R504 10K

Q503 417-284

Q504 417-283

C502 2.7

R508 10K

Q501 417-283

Q502 417-283

C501 10μF(N.P.)

R502 560

R501 220K

R505 220K

R506 1000 1%

C503 330μF

R507 6800 1%

C504 100μF

R513A 25K

R514 180

R515 910

C506 47μF N.P.

Q505 417-283

R509 68K

R511 2700

R512 120

C530 .05

R516 3.3K

C510 10μF(N.P.)

C507 .05

C508 .05

C512 10μF(N.P.)

R517 2.2M

R518 2.2M

R519 39K

R521 82K

C509 .1

C511 .1

SW503A

SW503C

R522 9100

R525 9100

C513 .0027

Q506 417-283

C514 2000

R532 22K

R533 68

Q507 417-284

C515 10

C516 100μF

TO X

Q508 417-283

SW504A

SW504C

R523 220

R526 220

R524 9100

R527 9100

R528 68K

R529 2700

R531 120

C531 10μF(N.P.)

R552 560

R551 220K

R555 220K

R556 1000 1%

C533 330μF

R557 6800 1%

C534 100μF

R513B 25K

R564 180

R565 9100

C536 47μF N.P.

Q519 417-283

R559 68K

R561 2700

R562 120

C532 2.7

R556 10K

Q515 417-283

Q516 417-283

Q517 417-284

Q518 417-283

R554 10K

R566 3.3K

C540 10μF(N.P.)

C537 .05

C538 .05

C542 10μF(N.P.)

R567 2.2M

R568 2.2M

R569 39K

R571 82K

C539

C541

SW503B

SW503D

R572 9100

R575 9100

C543 .0027

Q521 417-283

C544 2000

R582 22K

R583 68

Q523 417-284

C545 10

C546 100μF

TO Y

SW504B

SW504D

R573 220

R576 220

R574 9100

R577 9100

R578 68K

R579 2700

R581 120

Q522 417-283

PART OF MAIN CIRCUIT BOARD

LEFT TREBLE

C242 .001

SW205A

C243 2000

C241 10μF(N.P.)

R292 2.2M

R291 100K

P211-6 GRY P503-4

TONE CONTROL CIRCUIT

P211-5 GRN P503-6

P211-4 YEL P503-5

AMPLIFIER CIRCUIT

+35V

P504-2 Red

R543 470K

R545 2700

R547 120

334

Q512 417-284

32.8

0

C525 100μF

P502-2 GRY

P203-1

PART OF MAIN CIRCUIT BOARD

MUTING SWITCH CIRCUIT

SW201A

R298 2.5M 1%

R541 5600

C523 10

Q509 417-284

.6

Q511 417-284

R546 68K

C524 10

R548 10K

-33.7

-.6

Q513 417-283

Q514 417-284

FROM X

R534 25K 1%

R535 100K

R539 25K 1%

C522 10μF N.P.

C517 10μF N.P.

R537 560

C518 .015

C521 .015

R536 2.2M

R538 2.2M

SW502A

SW502C

C519 .015

C520 .015

R544 22K

-35

-35V

P504-4 WHT-RED

LEFT BASS

SW205 TREBLE TURNOVER

5KHZ FLAT 2.5KHZ

SW201 MUTING -20DB FLAT -40DB

RIGHT BASS

SW502 BASS TURNOVER

250HZ FLAT 500HZ

+35V

P504-2 RED

C553 10

R584 25K 1%

R585 100K

R589 25K 1%

R593 470K

R595 2700

R597 120

Q526 417-284

32.8

33.4

C547 10μF N.P.

R587 560

C552 10μF N.P.

C548 .015

C551 .015

R586 2.2M

R588 2.2M

SW502B

SW502D

C549 .015

C550 .015

Q524 417-284

Q525 417-284

R596 68K

C555 100μF

P502-1 YEL

P203-2

R297 250K 1%

SW201B

R298 2.5M 1%

C554 10

R598 10K

Q528 417-284

Q527 417-283

R591 5600

P503-2 BLU P211-2

P503-3 BLK P211-1

P503-1 WHT P211-3

FROM Y

R293 100K

TREBLE

C244 10μF(N.P.)

R294 2.2M

C245 2000

SW205B

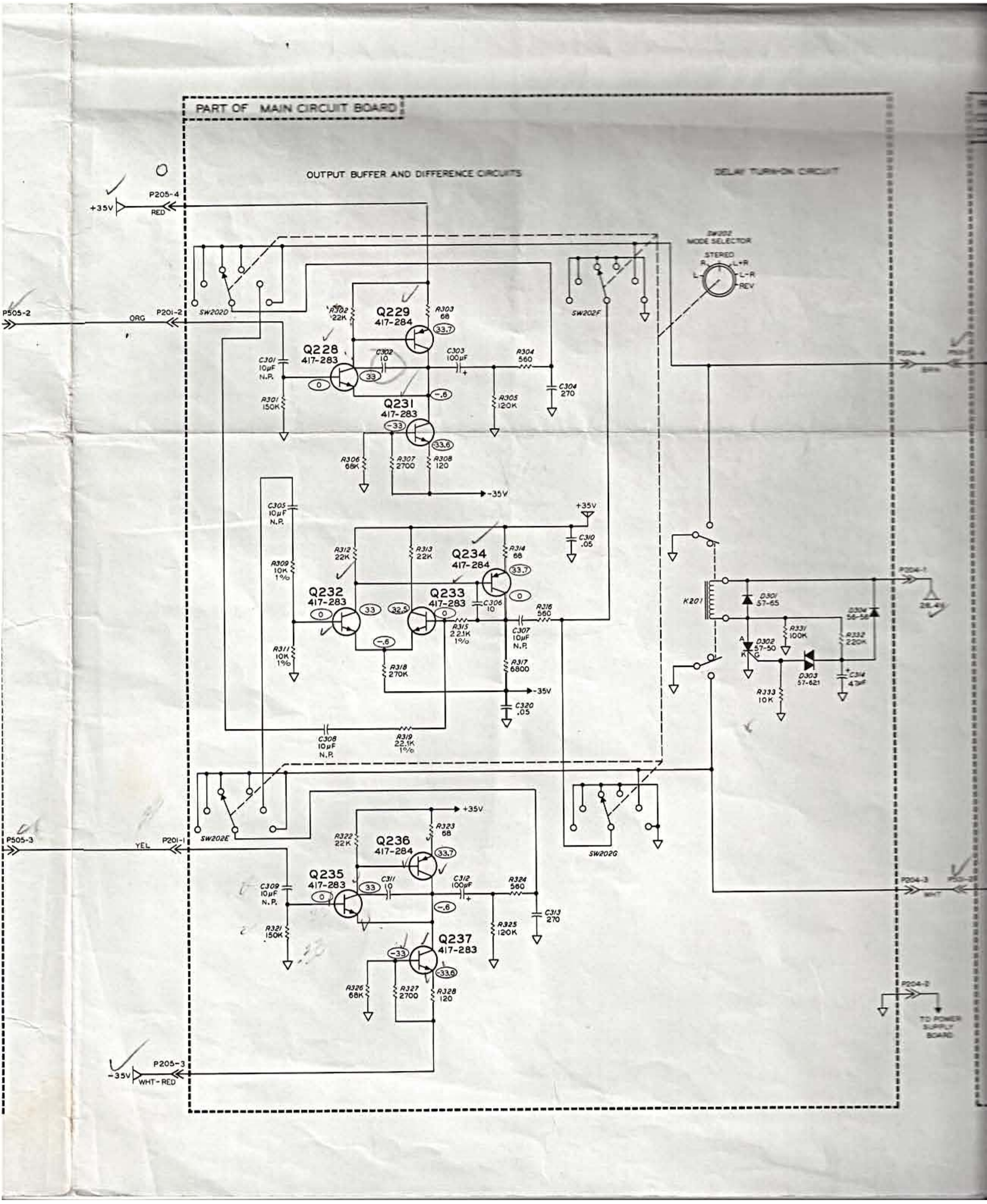
C246 .001

R594 22K

-35V

P504-4 WHT-RED

(PART OF) MAIN CIRCUIT BOARD


PART OF MAIN CIRCUIT BOARD
OUTPUT BUFFER AND DIFFERENCE CIRCUITS
DELAY TURN-ON CIRCUIT
+35V
P205-4
RED
SW202
MODE SELECTOR
STEREO
R
L
L+R
L-R
REV
P505-2
ORG
P201-2
SW202D
SW202F
R302 22K
Q229 417-284
R303 68
33.7
Q228 417-283
C302 10
C303 100µF
R304 560
C301 10µF N.P.
33
0
-.6
R301 150K
Q231 417-283
C304 270
R305 120K
-33
33.6
R306 68K
R307 2700
R308 120
-35V
C305 10µF N.P.
+35V
C310 .05
R312 22K
R313 22K
Q234 417-284
R314 68
R309 10K 1%
Q232 417-283
Q233 417-283
C306 10
32.5
R316 560
R315 2.21K 1%
C307 10µF N.P.
R311 10K 1%
R318 270K
R317 6800
-35V
C320 .05
C308 10µF N.P.
R319 22.1K 1%
K201
D301 57-65
D304 56-56
R331 100K
R332 220K
A
K
G
D302 57-50
D303 57-621
C314 47µF
R333 10K
P505-3
YEL
P201-1
SW202E
SW202G
R322 22K
Q236 417-284
R323 68
Q235 417-283
C309 10µF N.P.
C311 10
C312 100µF
R324 560
C313 270
R321 150K
R325 120K
Q237 417-283
R326 68K
R327 2700
R328 120
P204-3
WHT
P204-2
TO POWER SUPPLY BOARD
P205-3
-35V
WHT-RED

PART OF
CONTROL
CIRCUIT BOARD

PART OF
MODE SWITCH
CIRCUIT BOARD

SPEAKER SELECTOR
CIRCUIT BOARD

LEFT

P501-6 → P401-4 GRN → J15 PREAMP OUT 1

P501-5 → P401-1 WHT-RED → PREAMP OUT 2 J13

SW501A

SW501B

SW501 OUTPUT 1 2 1+2

RIGHT

P501-3 → P401-3 WHT-ORG → J16 PREAMP OUT 1

P501-4 → P401-2 RED → PREAMP OUT 2 J14

SW501C

SW501D

BLK

SELECTOR SW601

OFF A B A+B

SW601A

ORG → J29 SPEAKER LEFT (B)

RED → J33 SPEAKER LEFT (A)

J30 SPEAKER LEFT (B) GROUND

J34 SPEAKER LEFT (A) GROUND

TS1

LEFT

BLK (A)

1 2

R601 270 2W

R602 270 2W

SW601B

RED (F) → J37

ORG

HEADPHONE

GRY (H)

BRN (J) → J36 SPEAKER RIGHT (A)

SW601C

WHT (L) → J32 SPEAKER RIGHT (B)

TS1

RIGHT

VIOL (C)

4 3

R603 270 2W

R604 270 2W

SW601D

GRY (B)

J31 SPEAKER RIGHT (B) GROUND

J35 SPEAKER RIGHT (A) GROUND

BLK